

RENEWABLE ENERGY INDUSTRY SURVEY

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Executive Summary

Slightly less than half of the current Colorado RE organizations are retail and wholesale companies. Direct industry organizations, such as construction, design, engineering, manufacturing, and R&D account for about 30% of the firms. The remaining 23% of organizations perform support functions.

When taking into account the number of employees, the composition of the industry is much different. In 1997 the direct industry organizations account for about 83% of the industry employment, while the retail and wholesale organizations account for slightly more than 13% of the total. In 1997, almost 76% of the RE employees worked for direct industry organizations and about 17% worked for retail and wholesale organizations.

About one-third of the organizations have been in business for less than five years and almost 45% started in 1990 or later. Less than 9% of the organizations were in existence before 1970.

One-third of the organizations indicated that their primary RE activity was related to photovoltaics. Almost 28% of the organizations are focused on solar activities. Other prominent organization activities include wood/pellet fuel equipment and wind energy.

The Colorado organizations rely heavily on the Colorado market to support them. Almost 37% have annual gross sales less than \$100,000 and almost 56% have annual RE sales less than \$100,000. Slightly less than 39% of the organizations sell all their products and services in Colorado and slightly more than 79% have no international sales. There is good news – the organizations are optimistic about the future and expect their sales to increase and expand into domestic and international markets. About 64% of the organizations rely totally on the RE industry for their sales.

Colorado organizations anticipate a growth rate of 4.9% in 1998. These organizations, however, expect growth of only about 4.8% over the next two years. Companies expect higher growth in the number of RE employees. The number of RE employees is supposed to increase 10.1% in 1998 and grow by 22.2% over the next two years. A majority of this growth will come from direct industry organizations.

The factors that will most likely impact these organizations are public and consumer education and low cost financing for residential and small commercial systems. At this time the organizations have not identified a need for export assistance, industrial development bonds or the development of a RE industrial park/incubator.

Policy makers have had little impact on the reason most Colorado organizations have located their business in state. These reasons include natural resources, climate, quality of life, positive environmental attitudes, in-state customers and a healthy state economy. From a public or private service perspective, the organizations indicated that technical expertise, debt financing, and marketing assistance were important to their organization, but were either not available or affordable. They also indicated that having a supply of college or high school educated workers was important, but that they were either not available or affordable.

While the organizations are optimistic about their growth and expect to have increased sales, about half of them indicated that they would not need to increase the size of their facilities to achieve this growth. Over two-thirds of the companies with relocation plans will remain in the same county and an additional 30% will re-locate within the state.

Methodology

The University of Colorado at Boulder Business Research Division (BRD) in association with the CU Business Advancement Center (CU-BAC) conducted this survey of the Colorado renewable energy (RE) industry in the fall of 1998 for the State of Colorado Office of Energy Conservation. At that time, there was no directory or list of RE companies. In August, the CU-BAC staff began to identify the population by combining the mailing lists of several energy-related organizations. In addition, they conducted secondary research using databases, the Internet and the Yellow Pages from Colorado telephone books. This list was then purged to remove obvious duplicate organizations. The final list of potential RE companies included 653 organizations.

The survey was developed with input from Marc Roper, State of Colorado Office of Energy Conservation and Kelly Christopher, International Sustainable Technology Business Center. A preliminary copy of the survey was field tested by organizations within the industry to determine the amount of time it took to complete the survey and its relevance to the industry.

Each of the 653 organizations was sent a postcard notifying them that they would be receiving a survey within the next week regarding the RE industry. Each organization was then mailed a tagged survey with a self-addressed postage paid envelope. Organizations were also given the option of faxing the survey to the BRD. Ten days later, all organizations were sent a follow-up postcard that had not returned a survey. One week after the requested return date of October 9, 1998, surveys were mailed to all organizations that had not responded. In mid-October a telephone campaign was conducted to increase the response rate. Over 200 telephone calls were made to the larger organizations which had not responded to the survey.

Of the 653 surveys, 109 were returned as being undeliverable or being a duplicate address, thus reducing the number of potential RE companies to 554. Respondents were qualified, based on their level of RE sales in 1997, to determine the maximum size of the industry in Colorado. Those organizations who did not derive RE revenue during 1997 were asked to return the survey having answered only that questions. For the purpose of this study, RE was defined as products or services related to renewable energy (RE), i.e. solar energy, wind energy, geothermal, fuel cells with PV and biomass-to-fuels, wood fuel equipment, etc. Activities include research, consulting engineering, installation, construction, retail, wholesale, distribution, manufacturing, power production and others.

There were 151 surveys returned where the respondents indicated they did not derive revenue from the RE industry in 1997. The resulting population size has been reduced to 393. There were 117 surveys returned from organizations indicating they had derived revenue in 1997, resulting in a response rate of 29.8%.

Information about the Responding Companies

These survey results are based on 117 responses of companies who derived revenue from the renewable industry in 1997. As shown in Table 1 nearly 45% are in their first 8 years of existence. One-third of the organizations have been in business 5 years or less. Slightly more than 31% started their business during the 1980s and almost 16% started their business in the 1970s. Slightly more than 8% of the organizations were started prior to 1970.

Table 1 – Years in Operation

| Year Started | Percentage |
|--------------|------------|
| 1990-1998 | 44.8% |
| 1980-1989 | 31.2% |
| 1970-1979 | 15.7% |
| 1960-1969 | 3.1% |
| Before 1960 | 5.2% |

RENEWABLE ENERGY ACTIVITY

The survey respondents were asked to identify their primary renewable activity from a list of 10 activities. As shown in Table 2, 33% of the respondents indicated that they work primarily in the area of photovoltaics. Slightly less than 28% of the respondents had a solar related primary renewable activity (passive solar, solar thermal or solar thermal electric).

Almost 39% of the respondents had a primary renewable activity in other areas (wind energy, geothermal, biomass- to fuels, fuel cell with PV, landfill gas, wood/pellet fuel equipment, and other activities.) Slightly more than 15% have a primary renewable activity of wood or pellet fuel equipment and 9% had a primary renewable activity of wind energy.

Respondents were given the opportunity to list activities other than the 10 activities listed as their primary renewable activity. A review of these open ended responses did not reveal any additional activities.

| Table 2 - Primary Renewable Activity | |
|--------------------------------------|---------|
| Renewable Energy Activity | Percent |
| Solar | |
| Passive solar | 13.5% |
| Solar thermal | 13.5 |
| Solar thermal electric | 0.9 |
| Total Solar | 27.9% |
| Photovoltaics | |
| Photovoltaics | 32.4 |
| Fuel cell with PV | 0.9 |
| Total Photovoltaics | 33.3 |
| Other Activities | |
| Wind energy | 9.0 |
| Geothermal | 0.9 |
| Biomass-to-fuels | 1.8 |
| Landfill gas | 0.0 |
| Wood/pellet fuel equipment | 15.3 |
| Other | 11.7 |
| Total Other Activities | 38.7 |

As shown in Table 3, the responding organizations have a variety of secondary renewable activities. The most prominent secondary renewable activities are wind energy, photovoltaics, solar thermal, and passive solar activities. It is to note the inclusion of wind energy as the top secondary renewable activity.

| Table 3 – Secondary Renewable Activities | | |
|--|-------|---------|
| Renewable Energy Activity | | Percent |
| Solar | | |
| Passive solar | 16.2% | |
| Solar thermal | 20.5 | |
| Solar thermal electric | 6.8 | |
| Total Solar | | 23.6% |
| Photovoltaics (PV) | | 28.2 |
| Photovoltaics | 28.2 | |
| Fuel cell with PV | 3.4 | |
| Total Photovoltaics | | 31.6% |
| Other Activities | | |
| Wind energy | 29.1 | |
| Geothermal | 3.4 | |
| Biomass-to-fuels | 8.5 | |
| Landfill gas | 3.4 | |
| Wood/pellet fuel equipment | 6.0 | |
| Other | 9.4 | |
| Total Other Activities | | 59.8 |

BUSINESS ACTIVITY

The survey respondents were asked to identify their primary business activity from a list of 13 activities. As shown in Table 2, the primary business activity of almost 48% of the responding organizations is either retail sales or wholesale distribution. Slightly less than 30% of the respondents indicated that their primary business activity is directly related to the industry (manufacturing, research, construction/installation, design, engineering, or power production.) The primary activity of almost 23% of the responding organizations is to support industry organizations (trade associations, project planning, training/certification, policy research, education and other.)

| Table 4 – Primary Business Activity | | |
|-------------------------------------|------|---------|
| Renewable Energy Activity | | Percent |
| Retail and Wholesale | | |
| Wholesale/distribution | 7.2% | |
| Retail sales and services | 40.5 | |
| Total Retail and Wholesale | | 47.7% |
| Direct Industry Activity | | |
| Manufacturing/assembly | 3.6 | |
| R&D | 5.4 | |
| Power production | 0.9 | |
| Construction/installation | 10.8 | |
| Design | 4.5 | |
| Engineering | 4.5 | |
| Direct Industry Activity | | 29.7 |
| Industry Support | | |
| Trade association/lobbying | 0.9 | |
| Project planning/implementation | 3.6 | |
| Training/certification | 1.8 | |
| Policy research and analysis | 4.5 | |
| Education/information | 6.3 | |
| Other | 5.4 | |
| Total Industry Support | | 22.5 |

As shown in Table 5, the responding organizations perform a number of secondary business activities. The most prevalent secondary business activities are design, construction/installation, project planning, education, and engineering.

| Table 5 – Secondary Business Activity | |
|---------------------------------------|---------|
| Renewable Energy Activity | Percent |
| Retail and Wholesale | |
| Wholesale/distribution | 12.0% |
| Retail sales and services | 15.4 |
| Direct Industry Activity | |
| Manufacturing/assembly | 12.8 |
| R&D | 10.3 |
| Power production | 8.5 |
| Construction/installation | 34.2 |
| Design | 42.7 |
| Engineering | 27.4 |
| Industry Support | |
| Trade association/lobbying | 7.7 |
| Project planning/implementation | 31.6 |
| Training/certification | 11.1 |
| Policy research and analysis | 9.4 |
| Education/information | 29.1 |
| Other | 3.4 |

Economic Impact

EMPLOYEES

In 1997 the total number of Colorado employees hired by the responding organizations was 4,866. In 1997, almost 83% of these employees were in the direct industry category. As shown in Table 6, these organizations expect to hire 483 additional employees by 2000. About 41% of these employees will be hired in the direct industry category and about 34% will be hired by retail or wholesale organizations.

During this same period the number of RE employees is expected to increase by 403. About 54% of these RE employees will be hired in the direct industry category and about 23% will be hired by retail or wholesale organizations.

| Table 6 – Employment Levels for Responding Organizations | | | |
|--|-------|-------|-------|
| | 1997 | 1998 | 2000 |
| Retail and Wholesale | 642 | 700 | 806 |
| Direct Industry | 4013 | 4,165 | 4,211 |
| Industry Support | 211 | 240 | 332 |
| Total Colorado Employees | 4,866 | 5,105 | 5,349 |
| Percentage Change | | 4.9% | 4.8% |
| Retail and Wholesale | 196 | 229 | 290 |
| Direct Industry | 882 | 945 | 1,100 |
| Industry Support | 88 | 110 | 179 |
| Total Renewable Energy Employees | 1,166 | 1,284 | 1,569 |
| Percentage Change | | 10.1% | 22.2% |
| RE/Colorado Percentage | 24.0% | 25.2% | 29.3% |

As shown in Table 7, about 96% of the organizations have less than 100 employees. In 1997 slightly more than 8% had more than 25 employees; in 2000 slightly more than 13% will have less than 25 employees.

Table 7 – Employees by Category

| Total Number of Colorado Employees | | | | | |
|------------------------------------|--------|-----------|------------|-------------|-----------|
| Year | 1 emp. | 2-10 emp. | 11-25 emp. | 26-100 emp. | >100 emp. |
| 1997 | 43.9% | 37.4% | 10.3% | 4.7% | 3.7% |
| 1998 | 37.4 | 42.0 | 10.3 | 6.6 | 3.7 |
| 2000 | 23.4 | 52.3 | 11.2 | 9.4 | 3.7 |

As shown in Table 8, slightly more than 11% of the organizations had more than 10 employees in 1997. In 2000 slightly more than 15.1% of the responding organizations are expected to have more than 10 employees.

Table 8 – Employees by Category

| Total Number of RE Employees | | | | | |
|------------------------------|--------|-----------|------------|-------------|-----------|
| Year | 1 emp. | 2-10 emp. | 11-25 emp. | 26-100 emp. | >100 emp. |
| 1997 | 50.9% | 37.8% | 8.5% | 1.9% | 0.9% |
| 1998 | 43.4 | 44.3 | 8.5 | 2.9 | 0.9 |
| 2000 | 29.2 | 55.7 | 9.4 | 4.8 | 0.9 |

Because the data is skewed so heavily to the smaller companies the mean may be an inappropriate measure of central tendency and the median may be a more accurate measure of central tendency. The median number of employees for the responding organizations was 2 in 1997, 3 in 1998 and 4 in 2000. The median number of RE employees for the responding organizations was 1 in 1997, 2 in 1998 and 3 in 2000.

MARKETS AND REVENUE

As shown in Table 9 the primary market for Colorado RE organizations is Colorado. On the average, almost 73% of the organizations indicated that Colorado was their primary market in 1997. As these organizations expand to national and international markets, this average is expected to decrease to slightly more than 63% in 2000.

Almost 39% of the organizations indicated that 100% of their 1997 sales were in Colorado. Again, as these organizations expand, almost 24% of these organizations expect to have 100% of their 2000 sales in Colorado.

A comparison of the mean and median shows the skewed nature of the data. This indicates that there is a greater reliance on sales in Colorado than shown when evaluating the mean. The evaluation of both the mean and median indicates that these organizations plan to expand their markets in the near term.

Table 9 – Markets for Colorado Organizations

| | 1997 | 2000 |
|--|-------|-------|
| Average Percent Colorado (Primary Market) | 72.8% | 66.3% |
| Average Percent U.S. (Primary Market) | 21.7 | 25.0 |
| Average Percent International (Primary Market) | 5.5 | 8.7 |
| Median Percent Colorado (Primary Market) | 95.0 | 85.0 |
| Median Percent U.S. (Primary Market) | 4.5 | 10.0 |
| Median Percent International (Primary Market) | 0.0 | 0.0 |
| Percent with 100% Sales in Colorado | 38.5 | 23.9 |
| Percent with 0% Sales International | 79.1 | 66.0 |

As shown in Table 10, about 83% of the organizations have less than \$1 million in gross annual revenue and about 93% have less than \$1 million in gross RE revenue. About 36% of the organizations have less than \$100,000 in total gross annual revenue, while another 27% generate between \$100K to \$249K in total gross revenue.

| | Table 10 – Total vs. RE Revenue | | | | | | |
|-------|---------------------------------|--------------|-------------|-------------|-----------|----------|--------|
| | <\$100K | \$100K-\$249 | \$250K-499K | \$500K-999K | \$1M-\$5M | \$6M-10M | >\$10M |
| Total | 36.4% | 27.3% | 10.0% | 9.1% | 8.2% | 2.7% | 6.4% |
| RE | 55.5 | 26.4 | 6.4 | 4.5 | 4.5 | .9 | 1.8 |

Slightly less than 64% of the organizations indicated that they generate all their revenue from RE sources. Slightly more than 57% of these organizations generate less than \$100,000 in annual gross revenues and an additional 23% generate between \$100,000 and \$249,000. Only 10% of the organizations generate more than \$1 million in total gross revenues.

As shown in Table 11 the Colorado RE organizations have customers in multiple markets. Almost 82% of the responding organizations indicated that they generated revenue from the residential market while slightly more than 62% generated revenue from the commercial market and slightly more than 60% generated revenue from the government market.

The respondents expect sales to increase the most in the residential and commercial markets. They is a sense of pessimism in the government market as over half of the respondents expect their sales in that area to stay the same or decrease.

| Table 11 – Sales by Category | | | | |
|------------------------------|----------------------------|---------------------------|---------------|----------|
| Market | Percentage of Sales (1997) | Sales Expectations (2000) | | |
| | | Increase | Stay the Same | Decrease |
| Residential | 81.6% | 62.7% | 36.4% | 1.0% |
| Commercial | 62.4% | 60.0 | 37.6 | 2.4 |
| Government | 60.3% | 48.7 | 42.3 | 9.0 |
| Industry | 47.9% | 53.9 | 46.1 | 0.0 |

SUPPLY AREAS

As shown in Table 12 the responding organizations indicated that it was most appropriate for them to purchase or acquire finished products, contract services and product components in Colorado.

| Table 12 – Applicability of Suppliers to Organizations | |
|--|-----------------------------------|
| RE Supply Needs | Applicable to Colorado Businesses |
| Finished products | 71.0% |
| Contract services | 58.7 |
| Product components | 57.0 |
| Raw materials and supplies | 40.0 |
| Transportation/distribution | 38.2 |
| Manufacturing equipment | 27.6 |

The responding organizations can often have their supply needs met locally or in-state and have minimal dependence on international suppliers for key supplies. As shown in Table 13, slightly more than 63% of the respondents who need finished products have local or in-state suppliers. Slightly more than 45% of the responding organizations indicated that they were able to acquire contract services

locally or in-state. Thirty-one percent of the responding organizations indicated they could purchase product components locally or in-state while slightly more than 54% were able to purchase them elsewhere in the U.S.

| Table 13 – RE Supply Needs | | | | |
|-----------------------------|----------------|----------|-----------------------|---------------|
| RE Supply Needs | Local (County) | Colorado | US (Outside Colorado) | International |
| Finished products | 26.3% | 36.8% | 36.8% | 0.0% |
| Contract services | 9.5 | 35.8 | 54.7 | 0.0 |
| Product components | 5.6 | 25.4 | 62.0 | 7.0 |
| Raw materials and supplies | 20.7 | 25.1 | 54.2 | 0.0 |
| Transportation/distribution | 31.5 | 51.8 | 12.9 | 3.7 |
| Manufacturing equipment | 25.0 | 53.2 | 21.8 | 0.0 |

Issues and Needs

FACTORS IMPACTING PROFITABILITY

Survey respondents were given a list of 18 factors that impact profitability. They were asked to identify and rank the top five factors. The responses were weighted and totaled to determine the overall most important factors. Based on this weighted total, these factors have been divided into primary and secondary factors.

Of these 18 factors, the most important factors were public and consumer education and low cost financing for residential and small commercial systems. The second tier of factors was PV net metering, green pricing programs and grants to develop and commercialize RE technologies.

| Table 14 – Primary Factors Impacting Profitability of Companies | |
|---|----------------|
| Factors | Weighted Total |
| Public and consumer education | 211 |
| Low cost financing for residential and small commercial systems | 185 |
| PV net metering | 105 |
| Green pricing programs | 99 |
| Grants to develop and commercialize RE technologies | 81 |
| Tax incentives for RE production and facilities | 67 |
| Restructuring energy sources | 66 |
| Low interest loans for manufacturing or acquisition of energy equipment | 65 |
| Increased state government use of RE | 58 |

The secondary factors are headed by the establishment of a uniform, simplified utility grid – tied to interconnections, training for the RE industry workforce, and a tax exemption for solar and wind power producing facilities. The factors of least value are RE specific export assistance, the establishment of an RE industrial park/incubator, and industrial development bonds

Table 15 – Secondary Factors Impacting Profitability of Companies

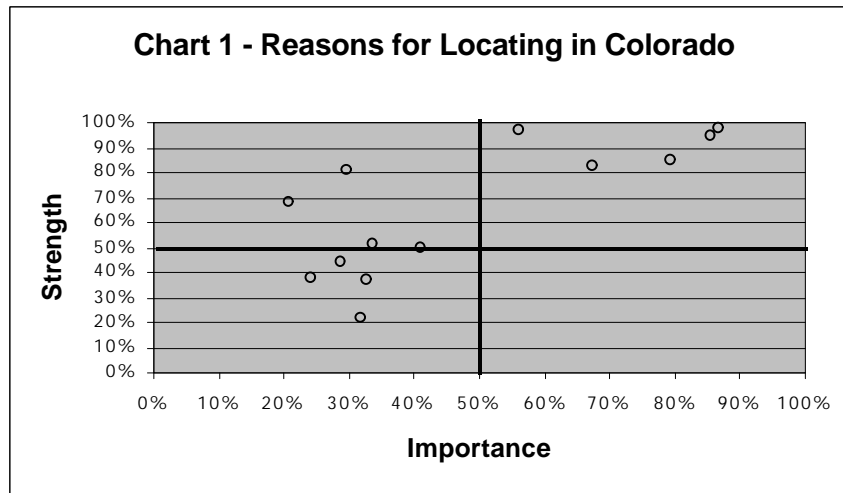
| Factors | Weighted Total |
|--|----------------|
| Uniform, simplified utility grid-tied interconnection | 51 |
| Training RE industry specific workforce | 43 |
| Percent of property tax exempt for solar and wind power producing or mfg. facilities | 43 |
| Disclosure and labeling of utility power sources | 39 |
| Income tax credit for RE manufacturing facility construction | 35 |
| Tax deductions for income received from sale or royalty stream of RE patent | 27 |
| Corporate state excise tax exemption on solar and wind power systems | 23 |
| Export assistance specific to RE products/services | 14 |
| RE industrial park/incubator | 14 |
| Industrial development bonds (low interest loans for manufacturing facility) | 13 |

REASONS FOR CHOOSING COLORADO

Survey respondents were asked to rate 13 reasons for choosing Colorado as the site of their business. They were also asked to rate the importance of these reasons and to indicate whether these reasons were strengths or weaknesses of the state. Areas that were identified as being important and state strengths are natural resources and state climate, general quality of life, positive environmental attitudes, in-state customers, and the healthy state economy. There were no areas that were identified as being important and state weaknesses.

As shown in Chart 1, these reasons for choosing Colorado as the site of their business can be grouped into four categories:

- Important and state strength – Both the importance and state strength ratings of these factors are 50% or greater.
 - Natural resources and state climate (86.4, 98.8)
 - General quality of life (85.3, 95.5)
 - Positive environmental attitudes (79.1, 85.4)
 - In-state customers (67.1, 83.6)
 - Healthy state economy (55.8, 97.4)
- Important and not state strength – The organizations rated the importance of these factors at least 50% and the state strength of these factors less than 50%.
 - None of the factors were identified as important, but not a state strength
- Not important and state strength – The organizations rated the importance of these factors less than 50% and the state strength of these factors at least 50%.
 - Available technical workforce (40.7, 50.7)
 - Labor costs (33.3, 52.3)
 - Proximity to federal labs (29.3, 81.5)
 - University research in RE (20.5, 60.8)
- Not important and not state strength - Both the importance and state strength ratings of these factors are less than 50%.
 - State government leadership (32.5, 38.0)
 - State and local tax structure (31.7, 22.7)
 - Cost of leasing or building space (28.4, 44.6)
 - In-state suppliers (23.8, 38.8)

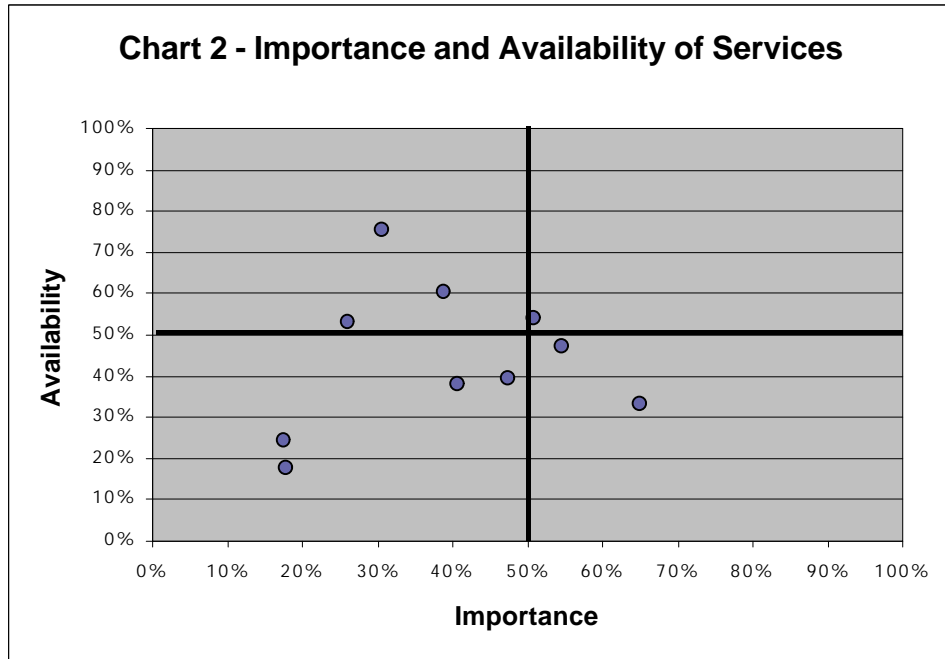


PUBLIC AND PRIVATE SERVICES

Survey respondents were asked to rate the importance of 11 support services to the development of their RE business over the next five years. They were also asked to rate the availability and affordability of these programs in the state.

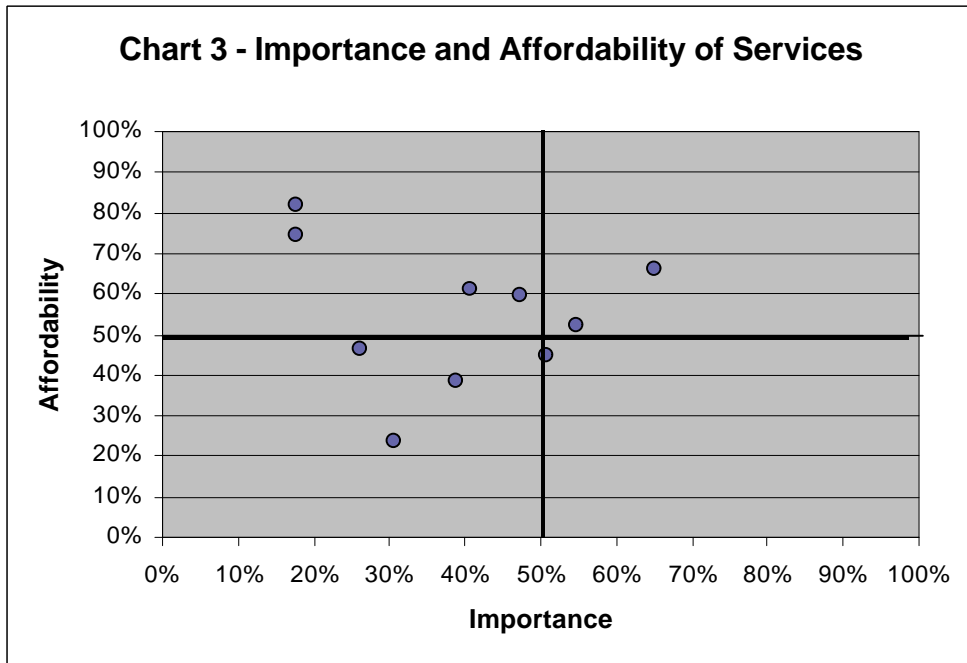
As shown in Chart 2 the ratings for these support services can be grouped into four categories:

- Important and available – Both the importance and availability ratings of these factors are 50% or greater.
 - Marketing assistance (50.6, 54.5)
- Important and not available – The organizations rated the importance of these factors at least 50% and the availability of these factors less than 50%.
 - Technical expertise (64.9, 33.3)
 - Debt financing (54.4, 47.4)
- Not important and available – The organizations rated the importance of these factors less than 50% and the availability of these factors at least 50%.
 - Design and engineering (38.7, 60.9)
 - Legal assistance (30.4, 75.8)
 - Management assistance (25.8, 53.3)
- Not important and not available - Both the importance and availability ratings of these factors are less than 50%.
 - Technical workforce (47.2, 40.0)
 - Venture/investor financing (40.5, 38.5)
 - Shared administrative services (17.5, 17.9)
 - Export assistance (17.4, 25.0)



As shown in Chart 3, the ratings for these support services can be grouped into four categories:

- Important and affordable – Both the importance and affordability ratings of these factors are 50% or greater.
 - Technical expertise (64.9, 66.7)
 - Debt financing (54.4, 52.6)
- Important and not affordable – The organizations rated the importance of these factors at least 50% and the affordability of these factors less than 50%.
 - Marketing assistance (50.6, 45.5)
- Not important and affordable – The organizations rated the importance of these factors less than 50% and the affordability of these factors at least 50%.
 - Technical workforce (47.2, 60.0)
 - Venture financing (40.5, 61.5)
 - Shared administrative assistance (17.5, 82.1)
 - Export assistance (17.4, 75.0)
- Not important and not affordable - Both the importance and affordability ratings of these factors are less than 50%.
 - Design and engineering (38.7, 39.1)
 - Legal assistance (30.4, 24.2)
 - Management assistance (25.8, 46.7)

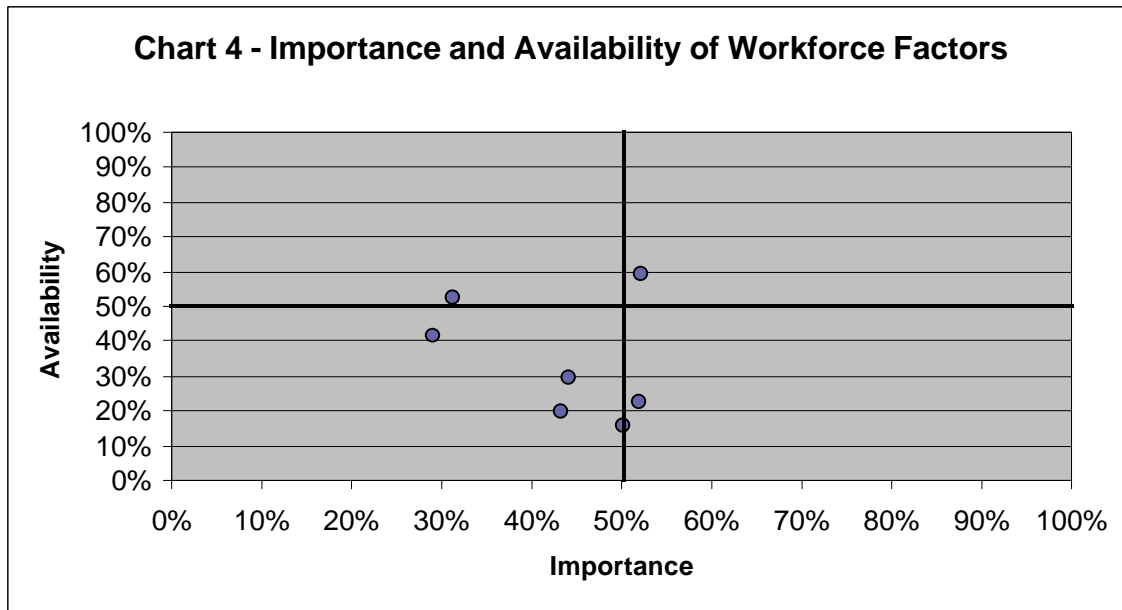


WORKFORCE FACTORS

Survey respondents were asked to rate the importance of 8 workforce factors as they related to the maintenance of the organization's technical workforce. The respondents were also asked to rate the availability and affordability of these workforce factors.

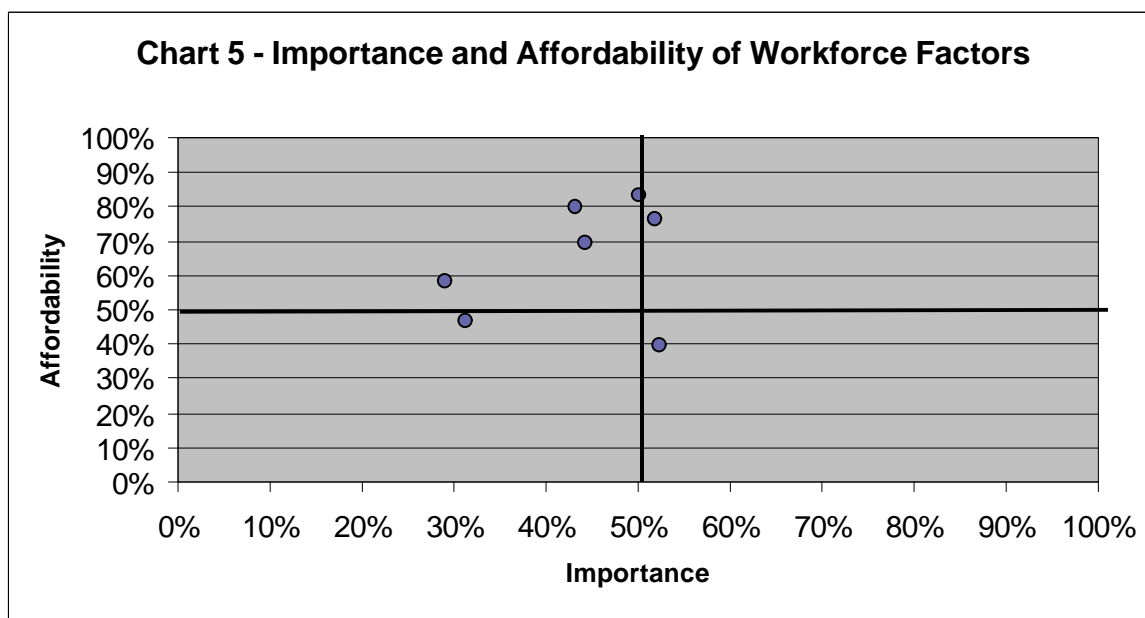
As shown in Chart 4, the ratings for these workforce factors can be grouped into four categories:

- Important and available – Both the importance and availability ratings of these factors are 50% or greater.
 - College educated workers (52.1, 60.0)
- Important and not available – The organizations rated the importance of these factors at least 50% and the availability of these factors less than 50%.
 - High school educated workers (51.7, 23.1)
- Not important and available – The organizations rated the importance of these factors less than 50% and the availability of these factors at least 50%.
 - Management training (31.1, 52.9)
- Not important and not available - Both the importance and availability ratings of these factors are less than 50%.
 - RE training programs (50.0, 16.0)
 - Employees with energy or environmental degrees (44.1, 30.0)
 - Specialized RE training with certification (43.0, 20.0)
 - Financial management training programs (28.9, 41.9)



As shown in Chart 5, the ratings for these workforce factors can be grouped into four categories:

- Important and affordable – Both the importance and affordability ratings of these factors are 50% or greater.
 - High school educated workers (51.7, 76.9)
- Important and not affordable – The organizations rated the importance of these factors at least 50% and the affordability of these factors less than 50%.
 - College educated workers (52.1, 40.0)
- Not important and affordable – The organizations rated the importance of these factors less than 50% and the affordability of these factors at least 50%.
 - RE training programs (50.0, 84.0)
 - Employees with energy or environmental degrees (44.1, 70.0)
 - Specialized RE training with certification (43.0, 80.0)
 - Financial management training (28.9, 58.8)
- Not important and not affordable - Both the importance and affordability ratings of these factors are less than 50%.
 - Management training (31.1, 47.1)



FACILITY NEEDS

Over the next five years, slightly less than half of the respondents indicated they would not make changes to their current facilities. Slightly more than 25% said they would move to a facility with larger space and slightly more than 12% said they would rent or lease additional facilities. Almost 8% of the respondents indicated they would renovate their current facilities.

Of those organizations that are planning to move within the next five years, slightly more than 2% indicated they would move out of state. The primary reasons for moving are:

- Change in space requirements
- Personal factors
- Need to lower the cost of facilities.

Slightly more than 68% of the organizations that are planning to move would relocate in the same county, while slightly less than 30% would locate elsewhere in Colorado.

Survey respondents were provided with the following definition of an eco-industrial park/sustainable technology business center and asked to provide potential benefits their organizations might receive from it:

An eco-industrial park/sustainable technology business center is a site where manufacturing and service businesses locate for a synergistic relationship through which they exchange material and energy waste streams. The formerly discarded “waste” by-products of one firm become the valued raw materials of another. Such a site may include a variety of services and features.

Slightly less than 69% of the respondents indicated they were not interested in participating as a tenant in an eco-industrial park/sustainable technology business center developed in Colorado for sustainable and RE companies. Only about 19% of the retail wholesale organizations support such a park while slightly less than 41% of both the direct industry organizations and industry support organizations support it.

Those who were interested in such a park typically indicated that the location of such a facility should be near their current location. The ranking of the sites is as follows:

- Denver Metro Area 42.4%
- Boulder 24.2
- Grand Junction 15.2
- Colorado Springs 12.1
- Ft. Collins 6.1

Those organizations that indicated an interest in being a tenant in this industrial park were asked to identify and rank the top five potential benefits from a list of 14 potential benefits.

The responses were weighted and totaled to determine the overall most important benefits. The overwhelming primary benefit is of a potential eco/industrial park is that it would have low cost facilities. Another benefit would be that it would provide access to research facilities and technical expertise.

Table 16 – Potential Benefits of Eco/Industrial Park

| Potential Benefits | Weighted Total |
|--|----------------|
| Low facility costs | 99 |
| Research facilities and technical expertise | 44 |
| On-site management and marketing advice and assistance | 37 |
| Low interest Industrial Development Bond financing | 36 |
| Shared office services, copying, receptionist, fax | 33 |
| Co-location with businesses using my product, service, or waste | 26 |
| Enterprise Zone tax reductions | 26 |
| Co-location with businesses providing products, services, and resources used by my company | 23 |
| On-site export assistance | 15 |
| Proximity to an international airport | 10 |
| Access to shared PC computer systems and software | 9 |
| Proximity to rail | 7 |
| Proximity to feedstock (bio-mass) | 5 |
| International trade zone | 3 |